

AMENDMENT

In the Claims

Claim 1 - 28 (cancelled)

Claim 29 (currently amended): A modified functional epothilone PKS that produces an epothilone D derivative when expressed in a non-*S. cellulosum* host cell, comprising (a) the proteins encoded by the *Sorangium cellulosum* *epoA*, *epoB*, *epoC*, *epoE*, and *epoF* genes and (b) a modified functional epoD protein that lacks a β -carbonyl modifying activity encoded by a *Sorangium cellulosum* epoD gene, wherein said activity is selected from the group consisting of a ketoreductase (KR) activity encoded by module 4, a dehydratase (DH), enoylreductase (ER) or KR activity encoded by module 5, or an ER or KR activity encoded by module 6.

Claim 30 (currently amended): The PKS [protein] of claim 29 comprising an epoD protein that, relative to an unmodified *Sorangium cellulosum* epoD protein, has an inactivating deletion in a β -carbonyl modification domain.

Claim 31 (currently amended): The PKS [protein] of claim 30, wherein the entire β -carbonyl modification domain is deleted.

Claim 32 (currently amended): The PKS [protein] of claim 31, wherein the β -carbonyl modification domain is the KR domain in module 6.

Claim 33 (currently amended): The PKS [protein] of claim 32, wherein the DH and KR domains of module 6 of the unmodified *Sorangium cellulosum* epoD protein have been replaced with a KR domain from a polyketide synthase other than an epothilone PKS.

Claim 34 (currently amended): The PKS [protein] of claim 30, wherein the deletion is in the ER domain of module 6.

Claim 35 (currently amended): The PKS [protein] of claim 30, wherein the deletion is in the KR domain of module 5.

Claim 36 (currently amended): The PKS [protein] of claim 30, wherein the deletion is in the ER domain of module 5.

Claim 37 (currently amended): The PKS [protein] of claim 30, wherein the deletion is in the KR domain of module 5.

Claim 38 (currently amended): The PKS [protein] of claim 30, wherein the deletion is in the KR domain of module 4.

Claim 39 (currently amended): A recombinant cell, or a cell-free system, comprising a functional *Sorangium cellulosum* epothilone polyketide synthase (PKS) [comprising a modified epoD protein] of claim 29.

Claim 40 (previously presented): The cell or cell-free system of claim 39 that further comprises a *Sorangium cellulosum* *epoK* gene product.

Claim 41 (previously presented): A modified functional epoD protein that lacks a functional ketoreductase domain in module 6.

Claim 42 (previously presented): A modified functional epothilone PKS comprising the proteins encoded by the *Sorangium cellulosum* *epoA*, *epoB*, *epoC*, *epoE*, and *epoF* genes and a modified functional epoD protein that lacks a functional ketoreductase domain in module 6.

Claim 43 (previously presented): A modified functional epoD protein that lacks a functional ketoreductase in module 5.

Claim 44 (previously presented): A modified functional epothilone PKS comprising the proteins encoded by the *Sorangium cellulosum* *epoA*, *epoB*, *epoC*, *epoE*, and *epoF* genes and a modified functional *epoD* protein that lacks a functional ketoreductase activity domain in module 5.